The Wobbly Oscillator

Cuyahoga Amateur Radio Society

April 2024 Volume 54 Number 4

Hams Who Serve

Total Eclipse - April 8th

From The Prez

Toby, WT8O

Dayton Hamvention
CARS Bus-May 18th

The tradition of CARS chartering a bus to the Dayton Hamvention will continue this year; a tradition dating back to the last century. We will be departing early Saturday morning on May 18th and returning that evening. There will be three stops, Middleburg Heights, Brunswick, and Lodi, making it convenient for all area hams. Convenience continues with easy sign-up and payment on the CARS website – www.2cars.org . The Hamvention bus trip is available to anyone wishing to go; non-CARS members and non-hams are more than welcome. The luxury motorcoach provided by Baron Bus exhibits leading edge technology, comfort, and convenience. It's important to note the bus is handicap friendly.

I say this every year, and I'll say it again. We are very fortunate to live so close to the world's largest ham radio event in the world. Those who have attended in the past couldn't help but notice attendees who came from all over the world. You see people from India, Germany, Japan, Brazil, Italy, Australia, China, and Chille; just to mention a few countries of origin. They travel to Dayton at great expense and time invested. All we have to do take a short enjoyable bus ride with our friends.

We cannot mention the Hamvention bus without thanking Eddie, KD8FTS, who updates the website and flyer and takes care of all reservations and payments; and Scott, AC8NW, whose connection with the bus company allows us to offer the round trip at the reasonable cost of $60.00.

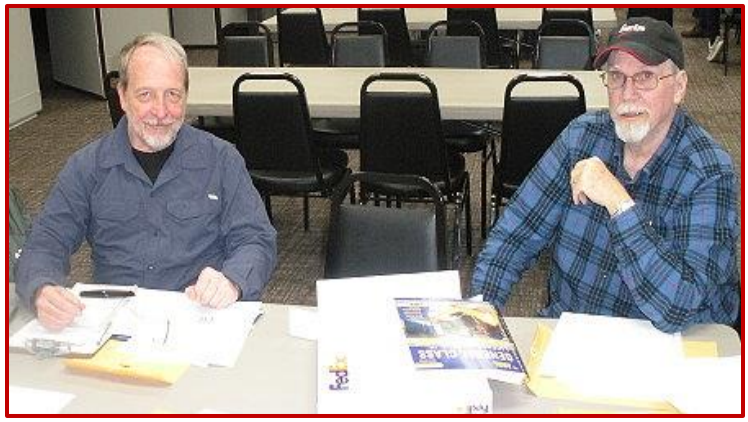
Help

It is time to give some members relief for helping out with jobs they have been doing for quite some time and are approaching overload as they have taken on more responsibilities. We need new members to step up and handle the refreshments at monthly meetings and committee chairpersons for the summer picnic and holiday party. I have put out a plea for these duties at meetings for months with no volunteers. Please contact me if you can help with these essential functions you have been enjoying.

Field Day

Bob, K8RGI, and I began planning the 2024 CARS Field Day late last summer. We needed a new site with Calvin Park being renovated and probably not appropriate for Field Day. We decided on the area around the Independence municipal complex, the beautiful setting contains all the requirements we need.

Please plan on participating in this year's event which will take place on Saturday, June 22nd and Sunday, June 23rd. Details will be publicized in this newsletter, on the CARS website, at monthly meetings, and on the weekly nets.



The licensing classes have been going exceptionally well. Students are staying totally engaged.

(Above) Joel, K8SHB, and Ron, K8RJH, review practice examinations with the Technician group.

(Left) Perry, KB8AYQ, and Tim, KF8AAF, are doing extremely well in the General class.

March Meeting Minutes

LOCATION - The meeting was held on March 12th, 2024, at the My Friends Restaurant in Cleveland.

CALLED TO ORDER - The meeting was called to order by President Toby Kolman, WT8O, at 7:30 PM.

PLEDGE OF ALLEGIANCE - Those present pledged allegiance to the flag of the United States of America.

INTRODUCTIONS - Those present introduced themselves. The meeting had 23 attendees, including four guests.

SEPTEMBER MINUTES - The February minutes were approved as published in the March issue of the *Wobbly Oscillator (WO)*.

Mark, KC8ESG, and Matt, KE8OZU, share a laugh before the meeting.

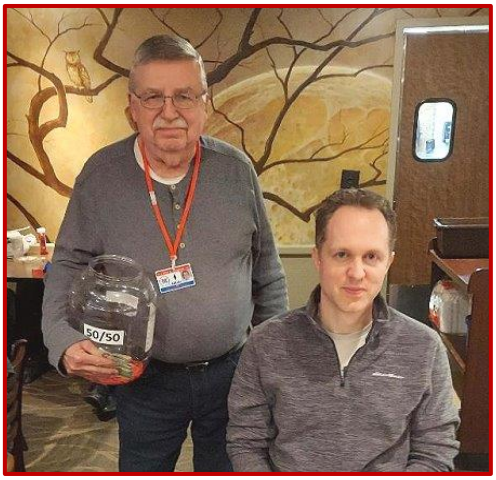
The jolly group was treated splendidly at My Friends.

TREASURER'S REPORT - Matt Perlman, KE8OZU, reminded members that dues are due. No concerns were reported with the financials.

PRESIDENT'S REPORT - Toby Kolman, WT8O, reported the following:

- Congressional legislation is proposed to allow people who live on properties covered by a Home Owners Association (HOA) to have amateur radio antennas. Details are on the ARRL website. Please call your representative to ask them to vote for it.
- The following new members were voted on and approved:
    - Gary Kovach, W8HNP - Previous members
    - Alan Farley, no callsign
    - Nick Rolin, N8CWE
- Hamvention Bus - Eddie, KD8FTS, provided the following update:
    - The bus is going down and back on Saturday, May 18th.
    - There will be three stops to pick up riders, like last year.
    - The price stays at $50 until the end of March. Then, it will go up, likely to $60.
    - You can pay through the website or with cash during the meeting.
    - Please spread the word to other hams who are interested.
    - Details on the website.
- Field Day will be June 22nd-23rd; we are still deciding on a site.
- License trustees - Matt Perlman, KE8OZU, and Toby led a discussion on the club license trustees:
    - Toby, WT8O will remain the trustee for K8ZFR.
    - A motion was proposed and passed to change the trustee for W8BM to Mark Marrow, WJ8WM, and the trustee for W8HBI to Matt Perlman, KE8OZU.

- The following positions need to be filled.
    - We need a chair for the Holiday Party/Picnic committee. We have folks willing to help, but we need a committee chair.
    - Refreshments - Looking for other folks to volunteer for these roles.
- Remind folks of the history of OM, YL, and XYL.
- WO Contributions - Thank you for all the contributions! Please continue to send them. Pictures are also great. Feel free to list items for sale.
- Roster accuracy - Thank you for all the updates. The roster is now pretty accurate. Please continue to send changes to Toby or Matt Perlman.
- New members
    - Invite fellow hams to attend CARS meetings.
- Special event stations
    - Remember to follow the special events stations listed in QST. They are lots of fun. Check it out and have fun with the hobby.
- Zoo station - David, AC8TN, is spearheading the setup of a station at the Zoo's rainforest, which is still being renovated.
- Best club
    - The goal is to make this the best radio club in the area.
    - Please share ideas you have for improving the club.
- Diawa CN 460 Meter is for sale. Contact Toby for details.



BOARD UPDATE - Mark Moro, WJ8WM, shared that the next Board meeting is on March 21st at the Club House, 6365 Pearl Rd, Parma Heights, OH 44130. All Club members are welcome to attend Board Meetings, but only Board members and Officers can vote. Let Mark know any items you'd like covered so he can put them on the agenda.

VICE PRESIDENT'S REPORT - Ron Hollas, K8RJH, reported the following:
- Consider the Value of ARRL Membership!
    - Long Standing, Growing Services, Public Service, Education, Advocacy, and Technology Access Support CARS with your Membership renewal!
- ARRL Learning
    - The ARRL Online Training courses;
        - On April 1, 2024, EC-001: Introduction to Emergency Communication and EC-016: Public Service and Emergency Communications Management for Radio Amateurs will be replaced by two new course offerings: Basic EmComm and Intermediate EmComm.
        - The courses will be available in the ARRL Learning Center at https://learn.arrl.org/.
        - Anyone currently enrolled in EC-001 or EC-016 must complete these courses by April 1st to receive credit.
    - ARRL plans to add two additional Learning Center courses later this year, titled "Advanced EmComm" and "ARES Leadership." Details will be available in the next few weeks.
    - The PR-101 "Public Relations" course will continue to be available.
- Latest ARRL Podcast… February/March 2024 edition, "The Joys of Being a General."
- ARRL Audio News – For the latest in Amateur Radio News and Developments, Available and posted weekly every Friday. Check out ARRL.org for the audio link subscriptions to these podcast files.

SECRETARY'S REPORT - Secretary Matt Neely, NU8H, asked for volunteers to be the backup Secretary.

PUBLIC SERVICE - Chuck, K8CVM, shared the following upcoming events need volunteers:
- All CARS members are invited to the local ARES meeting. The meetings are held at the Helwig Whistle Stop on the third Tuesday of the month. Visit https://n8esg.org/ for details and to volunteer. The following events need volunteers:
    - East vs. West Marathon on April 6th
    - Solar Eclipse on April 8th

VE UPDATE - Metro, W8MET, reported that the last session went well. One new Technician was licensed, and two Technicians upgraded to General. The next session is Sunday, May 12th, at 9:15 AM at the Old Elmwood Recreation Center, 6200 Pete Wisnieski Pkwy., Independence, OH 44131.

PROGRAM COMMITTEE - Joe, KD8BAL, reported:
- April's presentation will be by the Cleveland Police Museum on the Terminal Tower or Torso murders.

TECH COMMITTEE - Scott, AC8NW, reported no concerns with the repeater. The Tech Committee is still investigating options for a replacement internet connection at the repeater site.

OLD BUSINESS - Toby, WT8O, led a discussion on the following:
- 10 (HF) Meter net
- New badge designs were shared; please share feedback on the designs.
- CARS clothing is available on the website.
- We're looking at in-field events so members can gain experience with the radio and field operations. If anyone is interested in planning one of these events, let Toby know.

NEW BUSINESS - Toby, WT8O, led a discussion on the following:
- Metro, W8MET, shared that another Morse Code class will be offered later this year. More details to come.

NEXT MEETING - The Cuyahoga Amateur Radio Society's next meeting will be on April 9th at the Busch Funeral Home on Ridge Road in Parma, Ohio.

ADJOURNMENT - Toby, WT8O, adjourned the meeting.

50/50 Drawing - Matt Perlman, KE8OZU, won the 50/50 drawing and donated the winnings back to the club.

Submitted by Matt Neely, NU8H, CARS Secretary

The group was treated to the presence of Chuck's, K8CVM, XYL and birthday girl,

The patriotic CARS members always start meetings with the Pledge of Allegiance.

Next CARS Meeting

Tuesday, Apr. 9 - 7:30 PM

Busch Community Room
7501 Ridge Rd. - Parma

Program details will be announced on the website and Wednesday evening nets.

See Website for Details - www.2cars.org

Board Meeting Minutes
March 20, 2024

The CARS Executive Board met on March 20, 2024 at the Clubhouse restaurant in Parma Heights, Ohio.

In attendance were Board Chairman Mark Moro, WJ8WM; Arp Viiberg, K8ARP; John Dernar, NU8Y; Toby Kolman, WT8O, and Matt Perlman, KE8OZU.

The meeting was called to order by Mark, WJ8WM, at 7:15 PM.

The first item discussed was the club investing funds in a high yield account. CARS treasurer Matt, KE8OZU, will investigate the best option. Matt, motioned the club invest a portion of the treasury in a high yield account, leaving enough in the current account for operational purposes once the best investment choice is determined. Mark, WJ8WM, seconded the motion. Without a quorum present, the motion will be voted on by the entire Board via email.

The second item discussed by the Board was to maintain the practice of subsidizing dues for members experiencing financial difficulties. Those present unanimously agreed to the continuation of the practice.

The last item discussed was the possibility of the club procuring an enclosed trailer to set up as a mobile communications station. The group concluded that although the concept would be an exceptional addition to the CARS equipment group; considering the initial cost, maintenance, storage, and limited use, it would be unfeasible at this time.

The meeting was adjourned at 8:03 PM.

Submitted by Toby Kolman, WT8O

The Fascinating History of Batteries

Ron, K8RJH

The common household battery that we use today has evolved with of modern electronics, and not much thought is given on its fascinating history or development. The battery is key element of modern daily life, being an effective portable source of stored energy.

In its simplest form, a battery is a device that stores chemical energy and converts it to electrical energy. The chemical reactions in a battery involve the flow of electrons from one material to another, powering an external circuit.

The "Volt Pile" from the 1800's

A Franklin Battery

Most amateurs are familiar with the official inventor of the battery, Italian physicist Alessandro Volta. In the year 1800, Volta created the "voltaic pile." It consisted of alternating discs of zinc and copper using with a brine-soaked cardboard separator between each layer.

Early experimenters found that connecting several Leyden jars (a type of capacitor to store electrical potential) together would create a stronger charge. The colonial America inventor Benjamin Franklin, has been noted as the first person to call his grouping of Leyden jars an "electrical battery", which is referencing the military term for weapons functioning together.

Moving to more modern times, batteries that we use in amateur and household applications today have evolved from the widespread use in powered telegraph lines and tube radios of the late 1800's. The early telegraph battery cells were fairly large cylindrical units using zinc carbon. Today, the slimmed down version of these cells are better known as A, C, and D battery types.

The common 9-volt battery used in toys, smoke detectors, and transistor radios have their early roots with tube radios, originating with the “Grid” battery. A grid bias battery is a type of battery that was commonly used in early tube battery-powered radios from the 1920s and 1930s. It provided a negative DC voltage, typically with taps at one and a half volt intervals up to nine volts. In the 1950’s, several manufactures dedicated a single voltage selection of nine volts and reduced the rectangular form that is recognizable as the 9-volt battery that was introduced in the mid-1950s, with the Power Pack No 3 (PP3) size becoming an ANSI standard in 1959. It was initially used to power transistor radios, earning the nickname “transistor battery.” Over the years, advancements in battery technology have improved the energy density and longevity of 9-volt batteries, making them suitable for a broader range of applications.

There is an abundance of battery history available on the internet that may answer several age-old questions such as “Why should one avoiding placement of a battery on the ground or concrete?”

A hundred years ago, this rule-of-thumb was quite useful, as the case around the battery was made of wood and the electrical cells were glass. If the concrete floor underneath was wet, the wooden case would swell, causing the glass cells to break.

The battery manufactures in the early 1900’s tried various packaging techniques for larger capacity batteries that eliminated the glass enclosure, such as hard rubber. Over a short period of time the rubber composite, which contained carbon, became slightly conductive leading to prematurely discharged batteries.

The batteries of today, however, are encased in plastic or hard rubber that significantly reduces this energy waste. All batteries do naturally self-discharge over time. This is due to an internal chemical process, not the type of material on which the battery is sitting.

New battery types are continually being created and designed to match the size and shape of modern electronics, such as laptops and smart phones, using safer and environmentally friendly chemistries, offering higher power densities, with quicker charge times and lower cost.

For additional information: https://batteryuniversity.com/articles https://www.telcomhistory.org/

Turn of the Century Telegraph Battery

A 1930 Grid Bias Battery

Early Model-T Two Cell Wood Box Battery

Antenna Bill in Congress
Toby, WT8O

Amateur radio operators have an opportunity to help our cause by contacting their congressional representatives and urging them to vote for Senate Bill S.9690 and House Bill H.R. 4006, known as the Amateur Radio Emergency Preparedness Act.

The ARRL has campaigned to Congress to eliminate Homeowner Association rules that prohibit the use of amateur radio station antennas. Both ARRL officials and the Congressional representatives who proposed the bills have publicly stated the importance of communications by the Amateur Radio Service in emergencies and disasters. League administrators have praised the Congressional members for introducing these bills.

Rather than complain about antenna restrictions, do something to help; contact your Senators and House Representatives to pass these bills.

April Net Sked

Apr	3	WT8O
Apr	10	K8RJH
Apr	17	KD8ACO
Apr	24	AC8NW

Nets are run every Wednesday at 9:00 PM on:

146.820 (PL 110.9)

443.825(+) PL Tone 131.8
Digital Yaesu Fusion / C4FM
Linked to the 146.82 Repeater

EchoLink Node 343470 (K8ZFR-R)

Allstar Node 47067

WIRES X Node 91242-Room 01242

CARS Repeaters

146.820 (-) PL Tone 110.9

Analog Repeater

Main Site – Brecksville

Receive Only Site – Brunswick

Receive Only Site – Shaker Hts.

AllStar Node 47067

EchoLink Node 343470 (K8ZFR-R)

WIRES X Node 91242 Room 01242

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443.825 (+) PL Tone 131.8

Digital Yaesu Fusion

Linked to 146.820 Repeater

Brecksville

****

444.75 (+) PL Tone 131.8

Analog Repeater

Not Linked to Other Repeaters

Shaker Hts.

World Amateur Radio Day April 18, 2024

David, AC8TN

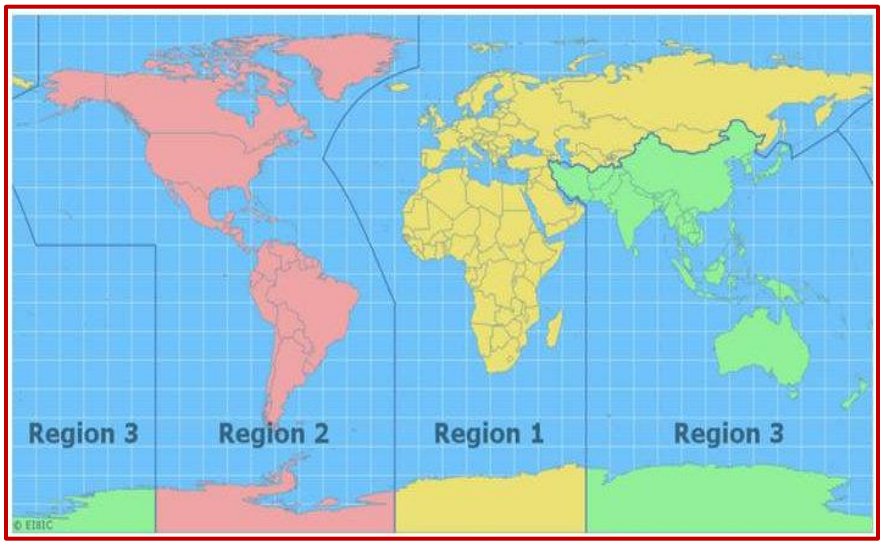
Since 1925, the International Amateur Radio Union (IARU) has been a very active supporter for international amateur radio and its spectrum. There are three regions within the organization covering the entire planet. Region 1 is Africa, the Middle East, and Northern Asia. Region 2 includes the Americas. Finally, Region 3 is the remainder of Asia and the Pacific.

World Amateur Radio Day (WARD) is April 18th. Why this day you may ask. It was on this day in 1925 that the IARU was founded in Paris. This year's theme for WARD is ***A Century of Connections: Celebrating 100 years of Amateur Radio Innovation, Community, and Advocacy***.

Hams have been active on the radio waves since the beginning of the 20th century. But it wasn't until about 1924 that worldwide QSO's were happening every day. Since that time, hams have contributed to many advances in technology and provided communications in emergency situations.

Make an effort to contact the special event stations that you'll be hearing the week before and after this year's WARD celebration.

[Info from the iaru.org web page.]



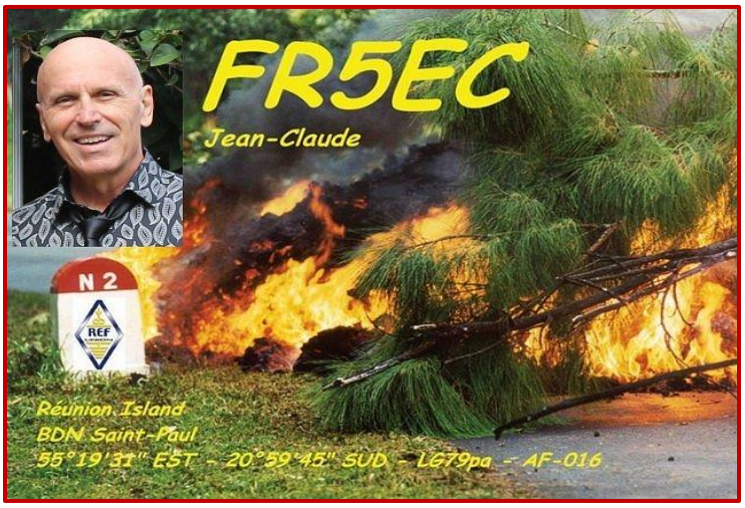
IARU Regions

DX Spotter Sites
David, AC8TN

On Leap Thursday, February 29,2024, I was blessed to see a station from Reunion Island on the DX spot list. I quickly got on 20 Meters phone and worked Jean-Claude, FR5EC. After recording the contact in my log book, I texted Metro, W8MET, and a few minutes later he texted back to look at the Jean-Claude QRZ.com log book. There both of our QSO's were 14 minutes apart. It's at times like this that internet log books are really great.

Use DX spotting sites, dxsummit.fi , to find counties of interest, and then get real time QSO confirmation from online logs like QRZ.com and clublog.org. Happy DX hunting!

By the way, Reunion Island is 9,572 miles from Cleveland.



My last 25 QSO

CALL	DX	DXCC	DATE	BAND	MODE	RSTr	RSTs
FR5EC	KA2VZX		2024-03-01 03:38	20m	USB	55	57
FR5EC	KB0RHA		2024-03-01 03:36	20m	USB	58	58
FR5EC	V31XX		2024-03-01 03:34	20m	USB	58	57
FR5EC	N5JJ		2024-03-01 03:31	20m	USB	59 5d	59
FR5EC	W9NVY		2024-03-01 03:29	20m	USB	42	59
FR5EC	KI5UPP		2024-03-01 03:26	20m	USB	59	59
FR5EC	KI5LIG		2024-03-01 03:25	20m	USB	55	55
FR5EC	W8MET		2024-03-01 03:23	20m	USB	57	559
FR5EC	K4SUS		2024-03-01 03:21	20m	USB	58	58
FR5EC	N5FTY		2024-03-01 03:17	20m	USB	57	57
FR5EC	W4ZOR		2024-03-01 03:12	20m	USB	57	57
FR5EC	KD5UYZ		2024-03-01 03:11	20m	USB	54	53
FR5EC	AC8TN		2024-03-01 03:09	20m	USB	59	59

March VE Session

Once again, Metro, W8MET, competently led his outstanding VE team consisting of Gary, NI8Z; Mark, NO8J; Roger, N8TCP, and Linda, N8LRS to another successful VE Session on Sunday March 10th, 2024 at the Old Elmwood Recreation Center in Independence.

Two hams passed their Technician exams becoming licensed amateurs. Congratulations to Keneth Quella Jr., KF8APH, and Roudolph Radva Sr.,KF8APU, and welcome to the Amateur Radio Service. Roudolph Radva Sr., KF8APU, and William Thelen, N2WZO, upgraded to General, well done by all.

The next VE testing session will be held Sunday, May 12th, at 9:15 AM at the Old Elmwood Recreation Center, 6200 Pete Wisniesky Parkway, Independence 44131. Directions and a map are on the CARS website homepage. For information or an appointment please contact Metro, W8MET, at 216-520-1320 or metro351@sbcglobal.net

As always, walk-ins are welcome.

WELCOME NEW MEMBERS

GARY KOVACH W8HNP

NICK ROLIN N8CWE

ROBERT WEIL KF8AIL

ALAN FARLEY

Honorary Members

Any person who by nature of outstanding or meritorious contribution to the furtherance of amateur radio and the ideals of the Cuyahoga Amateur Radio Society

Robert Check, W8GC
Elected 2/10/15

Thomas Wayne, WB8N
Elected 1/10/17

Dwaine Modock, K8ME/SK
Elected 5/9/17

Toby Kolman, WT8O
Elected 10/10/17

Jerry Smith, NW9H
Elected 5/8/18

Ron Borkey, K8VJG/SK
Elected 5/14/19

Ed Stevens, WB8ROK/SK
Elected 8/10/21

Vince Bak, N8OVW/SK
Elected 11/14/23

CMP Competition Center
Air Gun Range
John, NV8Y

The Gary Anderson Competition CMP air gun range is located on the grounds of the Camp Perry National Guard Training Site in Port Clinton, Ohio.

The mission of the Civilian Marksmanship Program is to promote marksmanship through firearms training, safety, competitions, and youth programs. The CMP was initiated in 1903 by an act of the U.S. Congress and has been active ever since.

There are indoor air rifle ranges and outdoor traditional shooting ranges – all open to the public. The CMP store sells air rifles, traditional government surplus firearms, ammunition, and a variety of other supplies.

Mr. CMP guards the Civilian Marksmanship Program building at Camp Perry

Junior Club air rifle shooters receive training in marksmanship and safety.

The indoor air gun range features 80 individual 10-meter lanes, each equipped with electronic targets. Computer screens at each lane instantly show shot placements.

Air pistols and air rifles look like traditional firearms but are NOT considered firearms. These devices utilize compressed air or CO2 to propel lead pellets downrange instead of the traditional gunpowder. Air guns are lightweight, make very little sound, sound have virtually no kickback. They are ideal for individuals just starting out in shooting sports as well as for experienced shooters.

Shooters as young as eight years old are welcome to participate. All shooters must watch a safety training video and be able to understand and comply with the safety requirements.

The facility hosts many large events that draw in serious competitors from all over the country. However, the indoor range at is open almost every Tuesday evening from 5:00 PM to 8:00 PM for the public to use.

The cost is very reasonable. Adults pay $10.00 Persons under 18, seniors, and the disabled pay only $5.00. The air rifles are furnished. AR15 style rifles can be rented for an additional $5.00. Pellets must be purchased. There is no time limit when using the facility.

I have utilized this facility many times over the years. We are fortunate to have this gem only an hour and a half away.

Bring your kids and grandkids here for a unique experience. There may be daytime hours in the summer, so check their website for the latest information.

Shooters on the firing line taking expert instruction.

CMP building entrance at Camp Perry.

View of west side of the Air Rifle Range.

The *Wobbly Oscillator* is a publication of the Cuyahoga Amateur Radio Society. Articles from this publication may be reprinted in any ham radio publication, if credit is given to this publication and the author, if known.

All submissions should be emailed to: Toby Kolman, WT8O at: wt8o@att.net

2024 CARS Committees, Officers, Board and Trustees

CARS 2024 Committees

50/50
Chair: Andy Evridge, KD8SCV

Audio/Video
Chair: Scott Smith, AC8NW

Awards
Co-Chairs: Bob Check, W8GC and Toby Kolman, WT8O

Fund Raising
Chair: Bob Check, W8GC
Members: Ron Hollas, K8RJH, Matt Perlman, KE8OZU and Gary Schmid, WA8GCR

ARRL Liaison
Chair: Ron Hollas, K8RJH

Audit
Chair: Ron Hollas, K8RJH
Members: Eddie Stevens, KD8FTS and Toby Kolman, WT8O

Field Day
Co-Chairs: Bob Robbins, K8RGI and Toby Kolman, WT8O
Members: Scott Smith, AC8NW, David Korow, AC8TN, Arp Viiberg, K8ARP, Ron Hollas, K8RJH, Andy Evridge, KD8SCV and Mark Moro, WJ8WM

Hamvention Bus
Chair: Eddie Stevens, KD8FTS
Member: Toby Kolman, WT8O

Historian
Chair: Toby Kolman, WT8O

Holiday Party, Summer Picnic
Chair: Toby Kolman, WT8O
Members: Arp Viiberg, K8ARP, Kim Balach Costa, KD8FTU, Diane Balach, KD8FTV and Mark Moro, WJ8WM

License Classes
Chair: David Noeth, KD8ACO
Members: Joel Chaney, K8SHB and Toby Kolman, WT8O

Media Representative
Chair: Andy Evridge, KD8SCV

Membership
Chair: Toby Kolman, WT8O
Member: Bob Check, W8GC

Net
Chair: Toby Kolman, WT8O
Members: Scott Smith, AC8NW, David Korow, AC8TN, Ron Hollas, K8RJH and David Noeth, KD8ACO

Newsletter
Chair: Toby Kolman, WT8O

Programs at Meetings
Chair: Joe Ulaszewski, KD8BAL
Members: Eddie Stevens, KD8FTS and Matt Perlman, KE8OZU

Property to Sell Custodian
Chair: Bob Check, W8GC

Public Service
Chair: Eddie Stevens, KD8FTS
Member: Arp Viiberg, K8ARP

QSL Manager
Chair: Metro Sinko, W8MET

Quartermaster
Chair: Toby Kolman, WT8O

Records Custodian
Chair: Terry Pillatt, KB8DTC

Refreshments - Coffee
Chair: John Dernar, NU8Y

Refreshments - Donuts
Chair: Matt Neely, NU8H

Refreshments - Pop
Chair: Ron Hollas, K8RJH

Scholarship
Chair: Bob Check, W8GC
Members: Bob Robbins, K8RGI, Ron Hollas, K8RJH, Matt Perlman, KE8OZU and Toby Kolman, WT8O

Sunshine (Welfare)
Chair: Andy Evridge, KD8SCV

Technical
Chair: Scott Smith, AC8NW
Members: Mark Scoville, AD8KE, Ron Hollas, K8RJH, Terry Pillatt, KB8DTC, Mark Rosewicz, KC8ESG, David Noeth, KD8ACO and Mark Moro, WJ8WM

VE Exams
Chair: Metro Sinko, W8MET

Webmaster/email
Chair: Bob Check, W8GC
Member: Matt Perlman, KE8OZU

2024 Officers

President
Toby Kolman, WT8O
440-525-6109
wt8o@att.net

Vice-President
Ron Hollas, K8RJH
216-379-7440
ron@hollas.co

Secretary
Matt Neely, NU8H
216-965-4476
matt@matthewneely.com
Alternate Secretary: Matt Perlman, KE8OZU

Treasurer
Matt Perlman, KE8OZU
216-337-1540
matt@seagem.me

CARS 2024 Executive Board

Board Chair

Mark Moro, WJ8WM
216-496-2871
Alternate: Arp Viiberg, K8ARP

Odd Year Board Members

Arp Viiberg, K8ARP, Bob Robbins, K8RGI and Eddie Stevens, KD8FTS

Even Year Board Members

Scott Smith, AC8NW, John Dernar, NU8Y and Mark Moro, WJ8WM

CARS License Trustees

K8ZFR Trustee

Toby Kolman, WT8O

W8HBI Trustee

Bob Check, W8GC

W8BM Trustee

Bob Check, W8GC

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